BRUHAT BANGALORE MAHANAGARA PALIKE

MEASUREMENT SHEET

RA 1ST AND FINAL BILL

Name of work: Package - 5, Includes 3 Works of Rs. 100.00 Lakhs

Estimated Cost : Rs. 100.00 Lakhs

Job Code: 006-18-000038, 006-18-000044, 006-18-000047

Head of Account : P-3316 Special Development Works

Name of Agency: Sri B.M. Muniraju, # 432/A, Unnai Nilaya, 1st Main, 1st Cross, Shivashankara Block, Hebbal, Bangalore - 24.

Work order No: BBMP/EE/BTP/WO/217/2018-19 Dated: 25.01.2019.

Measurements Recarded on :

Sl No.	Description	No.	L	B1	B2	AV. B	D	Qty	Rate / Unit	Amount
1	Earthwork excavation by manual means in ordinary soil involving an average horizontal throw upto 2 meters and an average lift upto 0.5 m, excavated surface leveled and sides neatly dressed, the disposed earth to be leveled neatly after breaking of clods complete as per specifications.								Cum	
	Qty as per Premeasurement Recorded Vide Page No. 1 & 2 is							**593.44**	198.42	**117750.00**
2	Removing B.S slab of drain and stacking etc complete as per specifications.								Sqm	
	Qty as per Premeasurement Recorded Vide Page No. 2 is							**625.77**	85.51	**53510.00**
3	Providing granite slabs of selected quality roughly dressed havinf a size of 7.5 cms thick and fixed in cement mortar (1:6) including fixing curing ete., complete etc complete as per specifications.								Sqm	
	New Granite Slab Drain									
	ROAD 1	1	30.00			1.80		54.00		
		1	30.00			1.80		54.00		
		1	19.00			1.80		34.20		
		1	30.00			1.80		54.00		
		1	23.70			1.80		42.66		
	ROAD 2	2	30.00			1.80		108.00		
		2	30.00			1.80		108.00		
		2	13.20			1.80		47.52		
	ROAD 3	1	24.60			1.80		44.28		
		1	30.00			1.80		54.00		
		1	19.60			1.80		35.28		
	ROAD 4	2	30.00			1.80		108.00		
		2	30.00			1.80		108.00		
		2	30.00			1.80		108.00		
		1	11.40			1.80		20.52		
	ROAD 5	2	30.00			1.80		108.00		
		1	30.00			1.80		54.00		
		1	30.00			1.80		54.00		
		1	30.00			1.80		54.00		
		2	21.00			1.80		75.60		
	ROAD 6	1	1.00			1.80		1.80		
		1	26.00			1.80		46.80		
		1	25.00			1.80		45.00		
		1	30.00			1.80		54.00		
		1	30.00			1.80		54.00		
		1	30.00			1.80		54.00		
		1	2.45			1.80		4.41		
	ROAD 7	1	19.00			1.80		34.20		
		1	24.50			1.80		44.10		
							Total Qty =	**1664.37**		
							Qty Limited to =	**1647.63**	706.62	**1164248.00**

Assistant Engineer

Assistant Executive Engineer

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	Description	No.	L	B1	B2	AV. B	D	Qty	Rate / Unit	Amount
	Providing and laying in position **plain cement concrete of mix 1:3:6** with OPC cement @ 220kgs, with 40mm and down size graded granite metal coarse aggregates @0.892cum and fine aggregates @ 0.465cum machine mixed, machine mixed, concrete laid in layers not exceeding 15 cms. thick, well compacted, **In foundation** including cost of all materials, labour, HOM of machinery, curing complete as per specifications.								Cum	
	Qty as per Premeasurement Recorded Vide Page No. 3 is							**335.78**	5677.71	**1906461.00**
5	Providing precast slab of 250mm thick including cost of all materials, labour, curing, transportation, loading unloading, etc.,complete as per the direction of engineer in charge - (Data rate Approved)								Cum	
	near Crist School Maruthi Saw Mill Road 1st Cross	1	6.50			1.50		9.75		
		1	6.30			1.50		9.45		
		1	5.70			1.50		8.55		
		1	6.25			1.50		9.38		
		1	5.70			1.80		10.26		
	near Baloon Factory	1	5.80			1.80		10.44		
		1	5.00			1.50		7.50		
		1	4.60			1.20		5.52		
		1	7.00			1.50		10.50		
		1	7.50			1.50		11.25		
		1	6.50			1.50		9.75		
		1	7.00			1.80		12.60		
		1	7.50			1.80		13.50		
		1	6.00			1.50		9.00		
							Total Qty =	**137.50**		
							Qty Limited to =	**138.00**	5644.00	**778872.00**
6	Excavation in Soil using Hydraulic Excavator CK 90 and Tippers with Disposal KSRRB M300-14. Excavation for roadwork in soil with hydraulic excavator of 0.9 cum bucket capacity including cutting and loading in tippers, trimming bottom and side slopes, in accordance with requirements of lines, grades and cross sections, and transporting to the embankment location and complete as per specifications. MORTH Specification No.301								Sqm	
	Qty as per Premeasurement Recorded Vide Page No. 4 is							**1413.95**	157.91	**223277.00**
7	Providing, laying, spreading and compacting crushed stone aggregates of granite / trap / basalt to wet mix macadam specifications including pre mixing the material with water at OMC in mechanical mix plant carriage of mixed method of tipper to site, laying in uniform layers with paver in sub-base/base course on well prepared surface and compacting with vibratory roller to achieve the desired density complete as per specifications								Cum	
	Qty as per Premeasurement Recorded Vide Page No. 5 is							**957.60**	1876.82	**1797243.00**
8	Providing and applying primer coat with S.S. bitumen emulsion on prepared surface of granular base such as WMM including cleaning of road surface and spraying primer at the rate of 0.60 kg / sqm using mechanical means complete as per specifications								Sqm	
	Qty as per Premeasurement Recorded Vide Page No. 6 is							**3830.40**	31.51	**120696.00**
9	Providing and applying tack coat using 80/100 grade bitumen(VG10) on the prepared black topped surfaces at 2.5 kg per 10 sqm, heating bitumen in boiler fitted with spray set (excluding cleaning of road surface) including cost of all materials, labour, HOM of machineries complete as per specifications								Sqm	
	Qty Vide Item No. 08 is							3830.40		
							Total Qty =	**3830.40**	13.50	**51710.00**
10	Providing and laying bituminous concrete 40 mm thick with hot mix plant, using crushed aggregates of specified grading, premixed with bituminous binder and filler, transporting the hot mix to work site, laying with a paver finisher to the required grade, level and alignment, rolling with smooth wheeled, vibratory and tandem rollers to achieve the desired compaction as per MORTH specification clause No. 500.9 complete in all respects complete as per specifications. MORTH Specification No. 509 - using 40/60 TPH capacity H.M.P. with Mechanical Paver Gr-II (30 mm to 45 mm) with 6 % VG-30								Cum	
	ROAD 1	1	30.00	6.10	5.85	5.98	0.04	7.17		
		1	30.00	5.85	5.80	5.83	0.04	6.99		
		1	19.00	5.80	5.50	5.65	0.04	4.29		

Assistant Engineer

Assistant Executive Engineer

8/11/2019

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Description	No.	L	B1	B2	AV. B	D	Qty	Rate / Unit	Amount
	1	30.00	5.50	4.80	5.15	0.04	6.18		
	1	23.70	4.80	5.40	5.10	0.04	4.83		
ROAD 2	1	30.00	5.90	5.95	5.93	0.04	7.11		
	1	30.00	5.95	5.70	5.83	0.04	6.99		
	1	13.20	5.70	6.00	5.85	0.04	3.09		
ROAD 3	1	24.60	6.90	6.20	6.55	0.04	6.45		
	1	30 00	6.20	5.90	6.05	0.04	7.26		
	1	19.60	5.90	5.90	5.90	0.04	4.63		
ROAD 4	1	30.00	6.25	5.80	6.03	0.04	7.23		
	1	30 00	5 80	6.10	5.95	0.04	7.14		
	1	30.00	6.10	6.60	6.35	0.04	7.62		
	1	11.40	6.60	6.60	6.60	0.04	3.01		
ROAD 5	1	30.00	6.40	6.00	6.20	0.04	7.44		
	1	30.00	6.00	6.40	6.20	0.04	7.44		
	1	30.00	6.40	6.20	6.30	0.04	7.56		
	1	30.00	6.20	6.70	6.45	0.04	7.74		
	1	21.00	6.70	6.70	6.70	0.04	5.63		
	1	1.00	6.10	6.10	6.10	0.04	0.24		
ROAD 6	1	26.00	5.50	6.10	5.80	0.04	6.03		
	1	25.00	6.10	4.80	5.45	0.04	5.45		
	1	30.00	4.80	3.90	4.35	0.04	5.22		
	1	30.00	3.90	3.80	3.85	0.04	4.62		
	1	30.00	3.80	3.80	3.80	0.04	4.56		
	1	2.45	3.80	3.80	3.80	0.04	0.37		
ROAD 7	1	7.00	5.50	6.20	5.85	0.04	1.64		
						Total Qty =	153.93		
						Qty Limited to =	153.22	8506.44	1303357.00
11 Marking with Hot Applied Thermoplastic Compound with Reflectrising Glass Beads on Bituminous Surface:- Providing and laying of hot applied thermoplastic compound 2.5 mm thick including reflectorising glass beads at 250 gms per sqm area, thickness of 2.5 mm is exclusive of surface applied glass beads as per IRC:35. The finished surface to be level, uniform and free from streaks and holes complete as per specifications								Tonne	
ROAD 1	2	30.00			0.10		6.00		
	2	30.00			0.10		6.00		
	2	19.00			0.10		3.80		
	2	30.00			0.10		6.00		
	2	23.70			0.10		4.74		
ROAD 2	2	30.00			0.10		6.00		
	2	30.00			0.10		6.00		
	2	13.20			0.15		3.96		
ROAD 3	2	24.60			0.15		7.38		
	2	30.00			0.15		9.00		
	2	19.60			0.10		3.92		
ROAD 4	2	30.00			0.10		6.00		
	2	30.00			0.10		6.00		
	2	30.00			0.10		6.00		
	2	11.40			0.10		2.28		
ROAD 5	2	30.00			0.15		9.00		
	2	30.00			0.15		9.00		
	2	30.00			0.15		9.00		
	2	30.00			0.15		9.00		
	2	21.00			0.15		6.30		
	2	1.00			0.10		0.20		
ROAD 6	2	26.00			0.10		5.20		
	2	25.00			0.10		5.00		
	2	30.00			0.10		6.00		
	2	30.00			0.10		6.00		
	2	30.00			0.10		6.00		
	2	2.45			0.10		0.49		
ROAD 7	2	7.00			0.10		1.40		
						Total Qty =	155.67		
						Qty Limited Tender Qty =	155.60	576.10	89641.00

8/11/19

Assistant Engineer

8/11/2019

Assistant Executive Engineer

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	Description	No.	L	B1	B2	AV. B	D	Qty	Rate / Unit	Amount
	Providing and constructing granite / trap / basalt size stone masonry in foundation with mud mortar, stone hammerd dressed in courses not less than 20 cms high, bond stones at two m. apart in each course including cost of materials, labour, curing complete as per specifications								Cum	
	Culvert									
	near Crist School Maruthi Saw Mill Road 1st Cross	1x2	6.50			0.60	0.90	7.02		
		1x2	6.30			0.60	0.90	6.80		
		1x2	5.70			0.60	1.00	6.84		
		1x2	6.25			0.60	0.90	6.75		
		1x2	5.70			0.60	0.90	6.16		
	near Baloon Factory	1x2	5.80			0.60	0.90	6.26		
		1x2	5.00			0.60	0.90	5.40		
		1x2	4.60			0.60	0.90	4.97		
							Total Qty =	50.20		
							Qty Limited Tender Qty =	49.86	4711.17	234899.00
13	Providing flush pointing to square rubble, course or uncoursed stone masonry with cement mortar 1:4, 20mm deep, after raking joints to depth of 20mm nicely lining, including cost of materials, labour, curing complete as per specifications								Sqm	
	Culvert									
	near Crist School Maruthi Saw Mill Road 1st Cross	1x2	6.50			0.90		11.70		
		1x2	6.30			0.90		11.34		
		1x2	5.70			1.00		11.40		
		1x2	6.25			0.90		11.25		
		1x2	5.70			0.90		10.26		
	near Baloon Factory	1x2	5.80			0.90		10.44		
		1x2	5.00			0.90		9.00		
		1x2	4.60			0.90		8.28		
							Total Qty =	83.67		
							Qty Limited Tender Qty =	83.10	109.14	9070.00
14	Providing and laying in position plain cement concrete of mix 1:2:4 with cement @ 240kgs, with 20mm and down size graded granite metal coarse aggregates @ 0.69 cum and fine aggregtes @ 0.459cum, machine mixed, concrete laid in layers not exceeding 15 cms. thick, well compacted, in foundation, plinth and cills, ncluding cost of all materials, labour, HOM of machinery, curing complete as per specifications.								Cum	
	Culvert									
	near Crist School Maruthi Saw Mill Road 1st Cross	1x2	6.50			0.60	0.10	0.78		
		1x2	6.30			0.60	0.10	0.76		
		1x2	5.70			0.60	0.10	0.68		
		1x2	6.25			0.60	0.15	1.13		
		1x2	5.70			0.60	0.15	1.03		
	near Baloon Factory	1x2	5.80			0.60	0.10	0.70		
		1x2	5.00			0.60	0.10	0.60		
		1x2	4.60			0.60	0.10	0.55		
							Total Qty =	6.22		
							Qty Limited Tender Qty =	5.94	6122.16	36366.00

8/11/19
Assistant Engineer

8/11/2019
Assistant Executive Engineer

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Description	No.	L	B1	B2	AV. B	D	Qty	Rate / Unit	Amount
Cement concrete pavement.Construction of un-reinforced plain cement concrete pavement, thickness as per design, over a prepared sub base with OPC cement or any other type as per clause 1051.2.2 design mix M20/M30 , with 25mm and down size graded granite metal coarse aggregates and fine aggregtes , with superplastisiser @3lts confirming to IS9103-1999 Reaffirmed-2008 , mixed in a concrete mixer of not less than 0.6 cum capacity and appropriate weigh batcher as per approved mix design, laid in approved fixed side form work (steel channel, laying and fixing of 125 micron thick polythene film, wedges, steel plates including levelling the form work as per drawing). Spreading the concrete with shovels, rackers compacted using needle, screed and plate vibrator and finished in a continuous operation including provision of contraction, expansion, construction and longitudinal joints including groove cutting charges, joint filler, separation membrane, selant primer, joint sealant, admixtures as approved, curing compound, finishing to lines and grades as per drawing complete as per specifications. - M30 (at 360Kg per cum coarse aggregate @ 0.69cum and fine aggregate @ 0.46cum)								Cum	
CC Road									
Baloon Factory 1st cross	1	30.00	5.50	5.60	5.55	0.10	16.65		
	1	30.00	5.60	5.60	5.60	0.10	16.80		
Baloon Factory 2nd cross	1	28.00	5.60	5.50	5.55	0.10	15.54		
	1	30.00	5.20	5.30	5.25	0.10	15.75		
	1	30.00	5.30	5.15	5.23	0.10	15.68		
Baloon Factory 3rd cross	1	25.00	5.15	5.20	5.18	0.10	12.94		
	1	30.00	5.20	5.10	5.15	0.10	15.45		
	1	30.00	5.10	5.20	5.15	0.10	15.45		
Baloon Factory 4th cross	1	26.00	5.20	5.10	5.15	0.10	13.39		
	1	30.00	5.10	5.10	5.10	0.10	15.30		
	1	30.00	5.10	5.20	5.15	0.10	15.45		
Baloon Factory 5th cross	1	16.00	5.20	5.30	5.25	0.10	8.40		
	1	30.00	5.00	5.00	5.00	0.10	15.00		
	1	30.00	5.00	5.10	5.05	0.10	15.15		
	1	14.00	5.10	5.00	5.05	0.10	7.07		
							Total Qty = 214.01		
							Qty Limited Tender Qty = 213.95	6600.36	**1412147.00**
16 Vaccum de-watering with vaccum pump and suction mat and compaction with skin floater clubbed with floating disc including cost of generator, HOM of machinery, Screed Vibratory, Power Floater, blade and disc etc., with all lead and lif								Sqm	
Baloon Factory 1st cross	1	30.00	5.50	5.60	5.55		166.50		
	1	30.00	5.60	5.60	5.60		168.00		
Baloon Factory 2nd cross	1	28.00	5.60	5.50	5.55		155.40		
	1	30.00	5.20	5.30	5.25		157.50		
	1	30.00	5.30	5.15	5.23		156.75		
Baloon Factory 3rd cross	1	25.00	5.15	5.20	5.18		129.38		
	1	30.00	5.20	5.10	5.15		154.50		
	1	30.00	5.10	5.20	5.15		154.50		
Baloon Factory 4th cross	1	26.00	5.20	5.10	5.15		133.90		
	1	30.00	5.10	5.10	5.10		153.00		
	1	30.00	5.10	5.20	5.15		154.50		
Baloon Factory 5th cross	1	16.00	5.20	5.30	5.25		84.00		
	1	30.00	5.00	5.00	5.00		150.00		
	1	30.00	5.00	5.10	5.05		151.50		
	1	14.00	5.10	5.00	5.05		70.70		
							Total Qty = 2140.13		
							Qty Limited Tender Qty = 2139.50	101.27	**216667.00**
								Total	**9515914.00**

#NAME?

8/11/19
Assistant Engineer
Ward No. 06

9/11/2019
Assistant Executive Engineer
Byatarayanapura Sub Division

Assistant Engineer

Assistant Executive Engineer

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